

10337

June R. P. Ross

Field Notes Book 1

DOCUMENT NO. 838
Invertebrate Paleontology
Yale Peabody Museum

1 of 2

Central States Ordovician-Silurian

May 12, 1995, to May 25, 1995.

Need ^{doc 838}
strat
summary
columns (to scale)
with Rock
units and
sample #'s
on it.



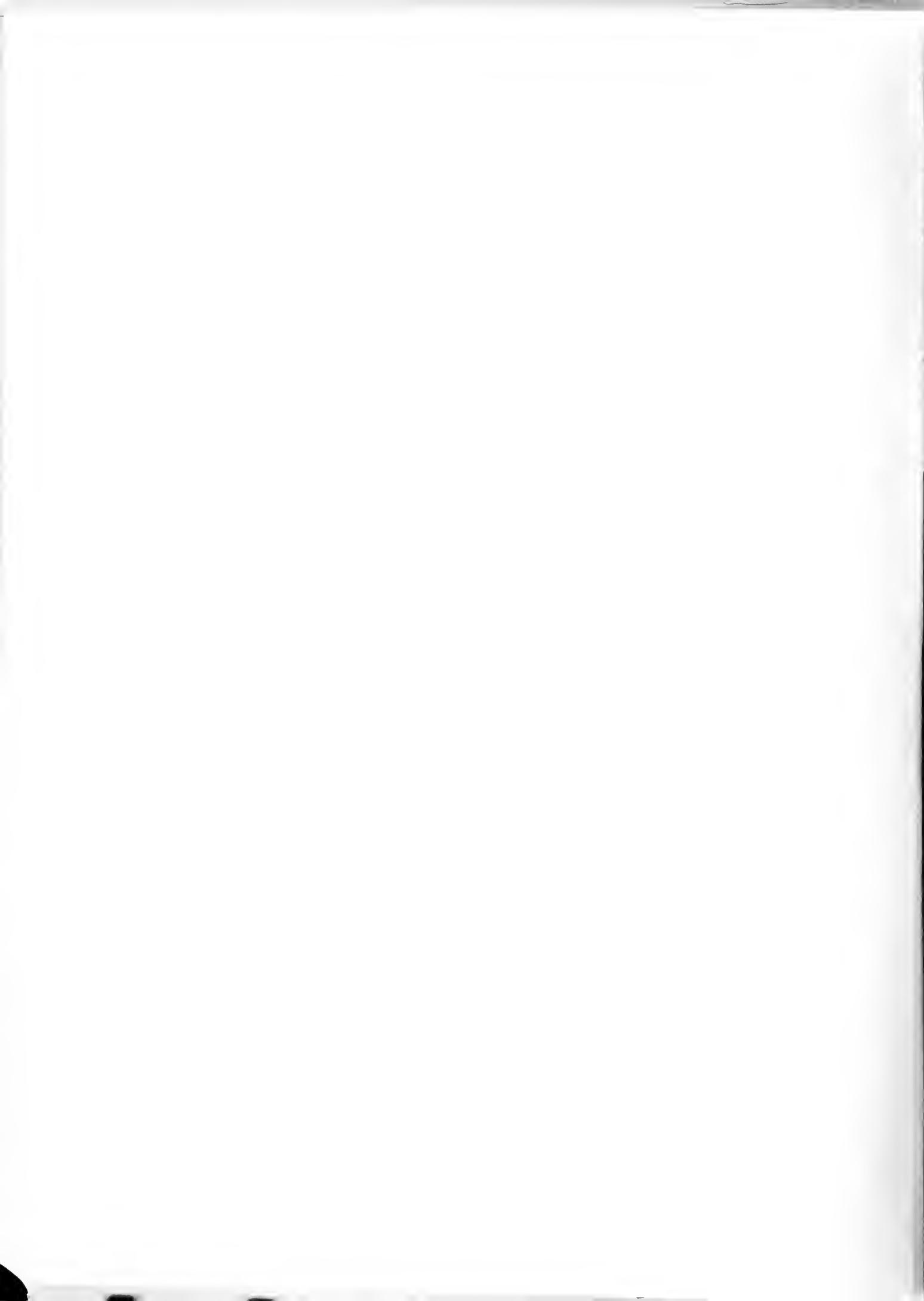
Irene R. P. Ross.

Stouffer failed to
recognize that these were
2 Receptaculites horizons
— one in upper Stewartville
& also in Cummingsville

Twin Cities Brickyard
is shallower & closer to
source of silts which
have dropped out due to
shallowing

Comments by
R. Sloan

On U.S. 52 Wagner Hill Section
5/24/95. 1 $\frac{1}{2}$ miles S. of Cannon Falls. From



5/12/95

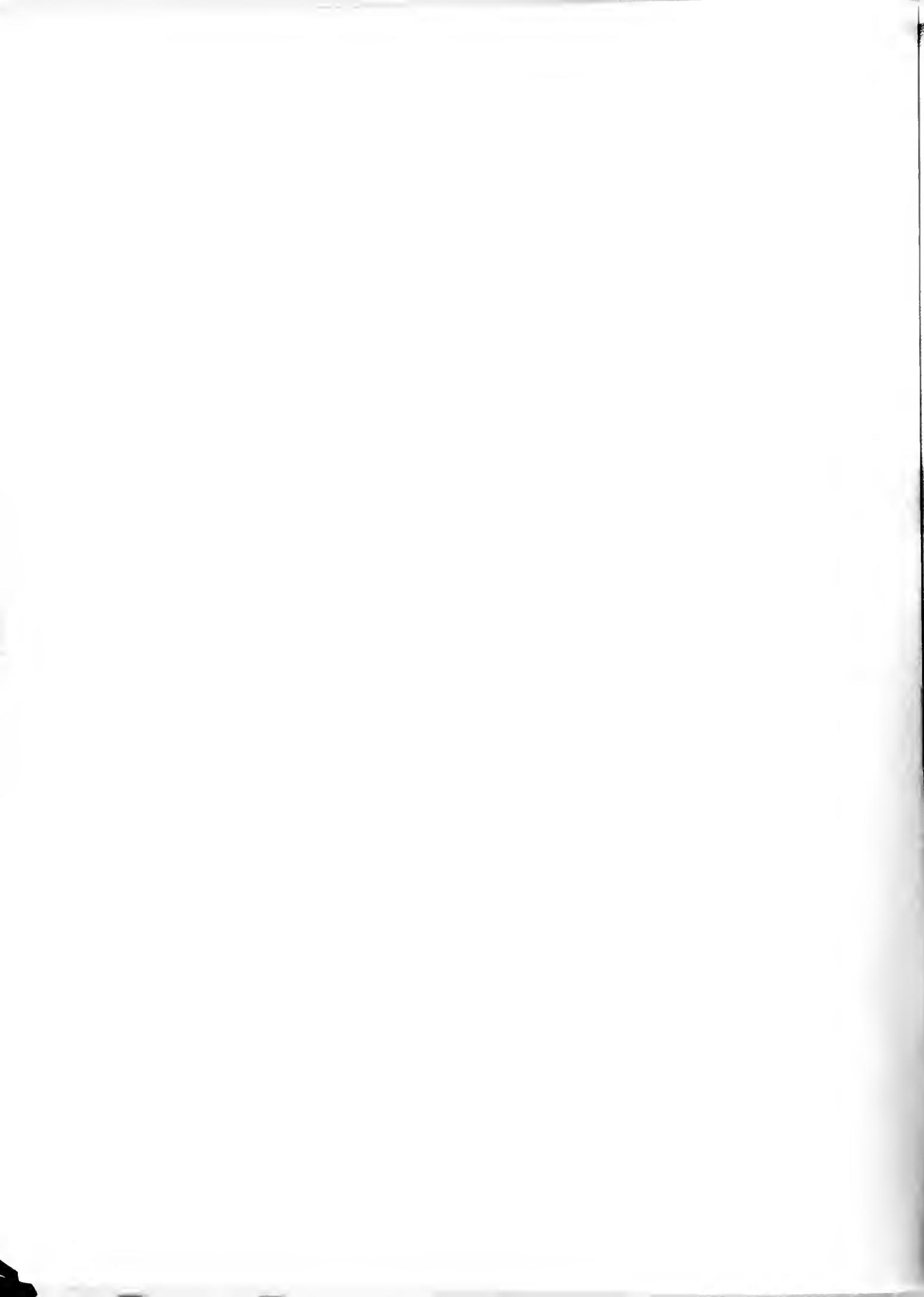
② Log in roadcut 0.1 mile E. of intersection
of Goodhue roads 9 & 14 on Rd. 14
Photo B & W upper part of section. E. side of
south end of roadcut on County Blvd 14
Photo C #3 cutto
Photo C. S. #4 middle part

Photo C. S. #5 showing disturbed bedding at
top of Hidden Fall Mbr.

Road cuts on both sides of road.
East side shows better overall
features but 2 ironstained horizons
are more clearly seen in W. side cut.
E. side has some large blocks that
have fallen down. See notations
on graphic sect. Fig. 20-4 Sloan, (ed.) 1987
(We had lunch at this site).

Glenwood Fm is a deepwater clastic unit with pyrite + lime nodules
with a "corrosion" zone at base.

Platteville is a complet of two to probably 5 sub packages
separated by pyritic "corrosion" zone. I take the
corrosion zones here to be deep water saline surfaces of
mineral deposition but not sediment deposition -
beneath at least two corrosion zones there are beds of



On U.S. 52 Wagner Hill Section
5/20/95. $1\frac{1}{2}$ miles S. of Cannon Falls. From
S. end of town at junction with

①

West side of U.S. 52, ^{S. bound. lines} color slick & white
Photograph. Hammer head on Unit
no. ~~1000~~ 105. Break in slope is prob. shale
at top of Unit 7. C.S. 1. Bt W#1. Sherwood Mbr.

Up higher in section C.S. 2. Bt W#2.
Top of Sherwood Mbr & overlying Wall Mbr
of Preaser Fm.

Mile Post 93 close to top of section
Bt W#3 just a few paces N. of M.P. 93

Cyclicity is about 1' to $2\frac{1}{2}$ ' through most of section
argill. limestone with very silty-shaly breaks - no
sequence boundaries as such, but there is a change
in amount of argillaceous material entering the
depositional system, parallel upwards.

St. Paul Minn II 1:250,000 pencilled location

Devonian & Mississ. Wagner Hill section
in Dr. Sloan, ed, 1987. Minn. Geol. Survey
Rept. of Invest. 85, Fig. 9-3



5/12/95

Burrowed-filled sediments I suggest the thickness of the beds ~~depth~~ = depth of burrows. Some graded bedding in Carmonia member; some pyritized fossils & fragments including blocks (Rapidianella found on one slab)

Blaterville & lower Decorah sh are "deep" water deposits of turbidites (calcareous) and omission surfaces (pyritic), burrowed muds, etc.

(Note: Town of Sogn is just W. of intersection of County roads 9 & 14 on County Rd. 14.)

Up hill (E.) of intersection of county roads 9 & 14 on County Road 9, there is an old X in higher units of Pease Fm. It may start at top of Cummingsville. Burrowed lime mud.

This "Plateau" is apparently on Pease Fm.



5/12/95 County Road 7, Olmsted Co.

3A 5/12/95 Cummingsville Type Section

x - entrance to private property (Xmas
tree on left) underneath on Long
blue gray shale forms an easy
floor. On N face as depicted in Fig. 20.7
(Sloan, et. 1987). N horizontal shale - all
chewed up

Br & W no off N. ^{Front face of} ^{Brassell Fm on N side}
Br & W 50 ft. ^{of each} ^{of each} ^{Brassell Fm on N side}
road cut - east side of
road. Top of Cummingsville ~~Brassell~~ Fm;
Fairplay Mbr - same foot weathering
The Martine Mbr of Cummingsville as shown in graphic section in
Sloan et al 1987 has more of a "saw tooth" cutting them indicated.
Nest "1m" cycles throughout type Cummingsville - Brassell Mbr has 4 (or 5?)
"cycles" that have almost no silty breaks, rest has siltstone.

To get to Cummingsville, go S on IL 52
from Rochester, MN, ^{toward Chatfield} and turn on
County Rd 7, and travel ^{ca} 3/4 miles to
road cut

See Sloan (1987, p.



5/12/95.

* Continue S of Co. Rd 4 to intersection w. Co. Rd 30,
turn right & go up hill to section
Cummingville Annex. County road 30
#4 W# 4 photo. Glenwood, Recatonia &
Plattville. lower part of rd cut
#4 W# 8 photo. Middle part of rd cut.
General view of top. Glenwood Fm at
bottom

Decker bentonite w. close to top of road cut
Unconformity (See Boundary) at (or near) top of Glenwood,
then Recatonia as a trawling system trach, deep water
Plattville, W Carbonates (debris) coming from SE?
and shale (Decoral) from northwest ???

Recatonia is difficult to identify
- thin shale & at thin late band
overlying shale

* 6/28/98 revised
location - 1998 Delta. Came north
from Iowa on IL 552, took MN 30
west for about 4 miles; road cut
west of intersection of ~~5 miles~~ across
bridge



late afternoon/evening. The following is roads
we came to Masonic Park, Fillmore Co, MN 5/12/95

(4) 8 or 9 cycles of 5-6' (stone at
creek level is 6 ft.)

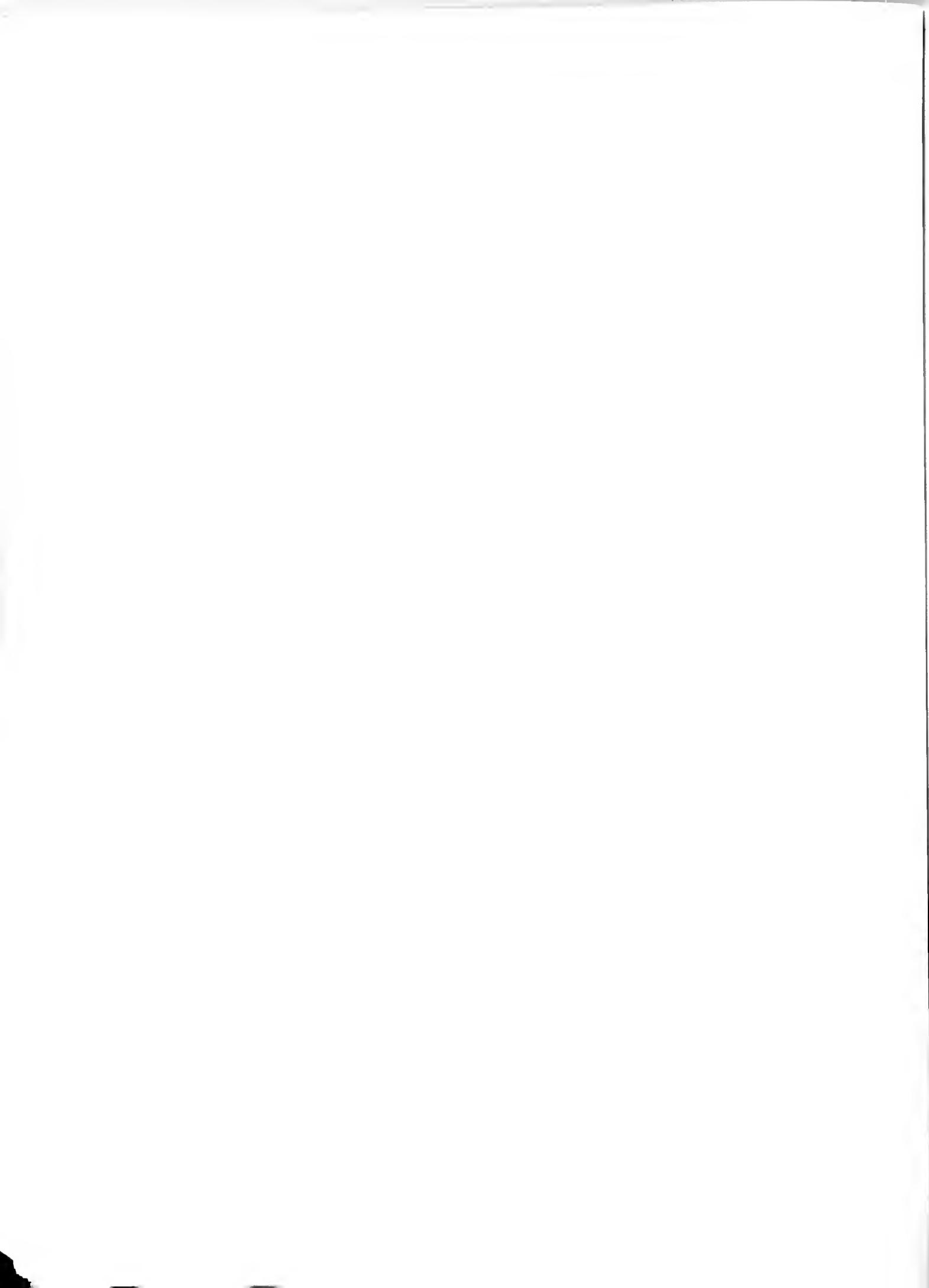
1"-1 1/2" silty breaks are yellow weathering -

weathered upper cycles breakdown into 1' foot ledges -

Ls. is buried in lighter & slightly dark light gray "clings"
The location is ^{and a little higher at} 3-4 miles N of Spring Valley

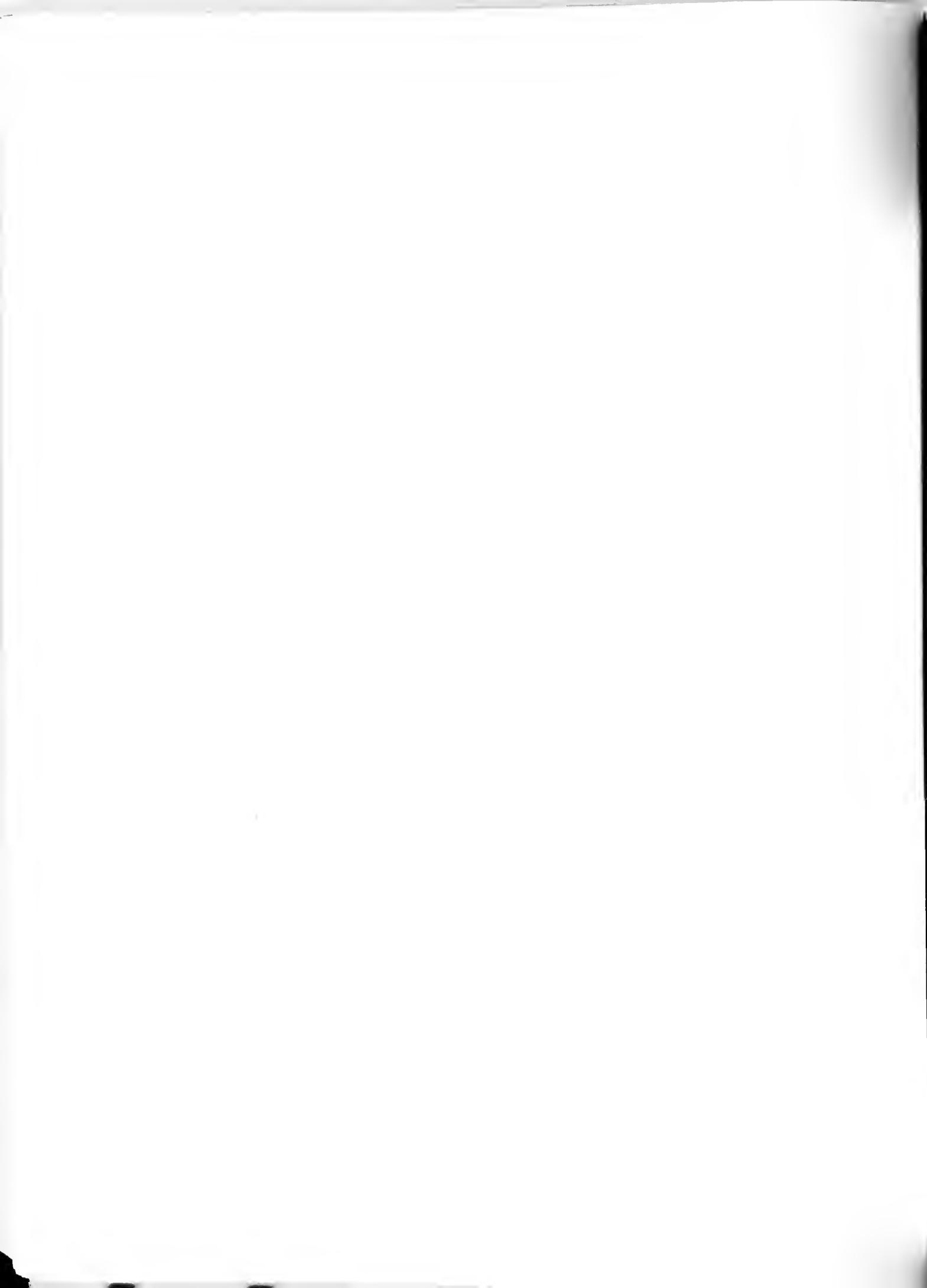
Photo B & W, & possibly a 2nd photo
at Masonic Park,

Wrote south of Masonic Park about 4 miles and
explored the roads in and out of the creek
valleys which exposed some of the Stewart Ls.
and some of the upper Cannonville.



5/12/95

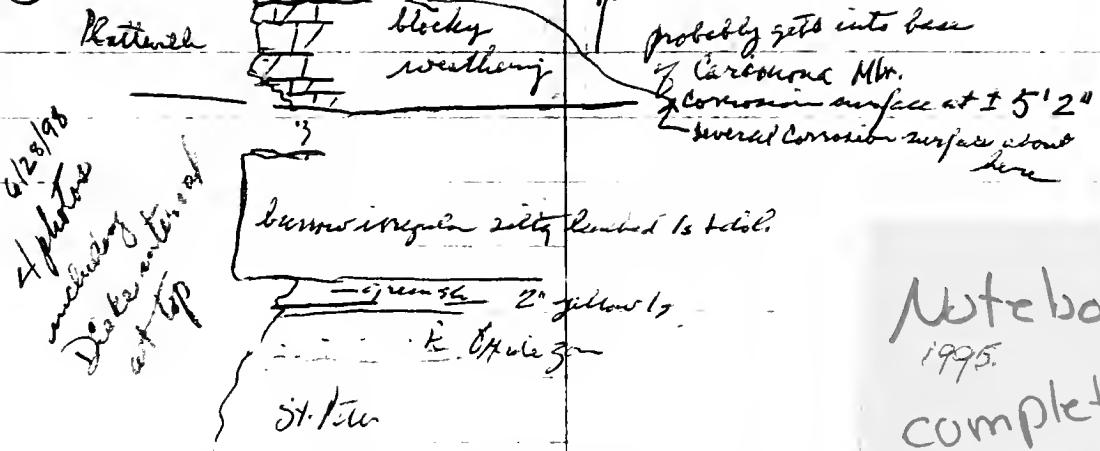
Kenyon is west on Minn. 60
- near Red Lake



5/14/95.

4½ miles E of Chaffield on State Hwy 30, ^{MN} then roadway cut on State Hwy 74 - see section below). about ½ mile W of Troy ¼ mile W of junction of Hwy's 30 & 74. (Maybe ^{4½} miles from
 [See sign outcrop section for ref.] Chaffield) Top of lower Glenwood Shale is irregularly worn ^{green}
 by "Mifflin" nodular ls. Mifflin is thoroughly burrowed
 has pseudomolds in a few beds. nodular limestone

(8)



Notebook 1
1995.
completed

We then returned to Hwy 30 & east to Rushford. At Rushford village we stopped at Conoco Station

Took Hwy 43 south to Mabel, then Hwy 14 east to Spring Grove. About 3 miles W of Spring Grove, there are 2 working



5/14/75

quarries, on each side of Hwy 44. See Fig 201,
topographic map (9A) (Blocks)

Spring Grove X, south side of Hwy 44
1 Coll. Bay. 5/14/95/A; float in Decorah Sh.
2. 2 B & W photos in X on S side of Hwy 44
2 B & W photos #19 & 20. in X on N side
of Hwy 44

(9B) X S. side of Hwy 44 (Hailings)
Scree slope shows numerous
brachiopods - a shell hash
in calcarenite. Fine calcilutite
below calcarenite. 3"-4" diam
orthocerid mollusc; trilobites

(9C) X N. side Hwy 44
late ledges (v. thin) 2"-3" - not v.
persistent from base $\frac{1}{3}$ to bottom
of upper $\frac{2}{3}$ of Decorah Shale.
v. dark grey to brownish black band
1 ft plus thick of shale with shell
hash here & there at top of it.
Pyrite & shell hash of brachiopods.
This suggests a sudden deepening
event creating anoxic shale
environment.



5/14/95 Kendallville, Iowa East side of ~~the~~

⑩ X N. of Kendallville on Upper Iowa R.
loc. 17. Hevossen, Geka & Broadhead, 1979.
B&W photo. Just before bridge over
river.

large grayish oval at top of Sinsinawa Mbr
& broken (extensively)

Pavlovec X, north bank of Upper Iowa R. at
Kendallville, Iowa. ~~SW 1/4 SE 1/4 sec. 33, T 100 N,~~
R 10 W. Sinsinawa 6'10"; Stewartville 35'10";
Dubuque Fm 19'1" Ridge Hill Mbr

See Hevossen, Geka & Broadhead

⑪ Loc. 33. X 3 miles SE of Kendallville, Iowa. Cattle rd at
2 B&W photos. X at small stream on N
side of rd. SW 1/4 SE 1/4 Sec. 1, T. 99 N, R 10 W. limestone
fairly substantial late 2-3 ft made
up of 2-3 "beds" - busted up into
pieces - is coming in & apperas in
section of Maquoketa Fm at top of X
Stewartville Fm 16'11"; Dubuque Fm 34'5" &
Maquoketa Fm 17'3"

Saw violets in bloom



5/14/95

1/2 mi S of Decorah, Twin Springs Rd.
1 Bluff faces on road on both sides
2 miles N of junction w/ Hwy 9. All
Stewartville Fm. Impressive "gateway"
to the city of Decorah with

We took St. Hwy 139 south from Kendallville
looked at X on Cattle Creek Road, then
rejoined Hwy 139 which led to Hwy 9
which took us to Decorah, Iowa
MacDonald's (& Walmart) not far
(S) from intersection of US 52 & St. Hwy 9.



5/14/95

Leverson, Gerb & Broadhead, loc. 9.

Road cuts Iowa Hwy 9, 7 miles SE of
Decorah, Iowa, SW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 10 & NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 9
3 B&W photos } T 97 N, R 7 W.
3 CS photos } because our came out

13 loc. 9. 1 B&W photo, 1 C.S. photo.

Packages of rocks become thinner &
less blocky; also more shale coming
in at upper 20 ft. See Leverson & Gerb
(1972, Iowa Acad. Sci. Fig. 2) - we agree
with graphic sect. for Dubuque here & at loc. 10.

We 1st visited this locality¹⁰ then loc. 9¹⁰
Leverson, Gerb & Broadhead loc. 10.

→ gate was locked, but CR walking down road to loc. 10, Hwy 9, 3 $\frac{1}{2}$ miles SE
of $\frac{3}{4}$ mile E of Decorah. →
Single lane bridge crosses stream
X on S side of ~~steet~~ road & east side
of creek. 12" shaly bed is well seen at both 9+10 and
is 10 to 12' below Dubuque-Maquoketa contact. (See L, G, & B, 1979)

Both locs 9 & 10 are comparable
in what they show. We don't think
Dubuque fm. is as thick as 34 ft. but
only ca 20 ft. - but exposures are
limited (also see L, G, & B, 1979 use a "marker" bed which is usually
lower than change into the ls/sh pattern typical of the Dubuque.)



loc. 10 (cont'd) NW 1/4 SE 1/4 sec. 9, T97N,
R 8 W. Stewartville for 17' 10" Dubuque 34' 7"

Macrobeta contact



5/14/95

Pottsville

Passed Pottsville X, $2\frac{1}{2}$ miles N. of Pottsville (saw from distance) \times east side of road; late afternoon sun showed "golden" \times face

1979

See Levorsen, Gerb & Broadhead, loc. 53, \times $4\frac{1}{2}$ miles NE of Pottsville, Iowa. NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 19, T 96 N, R 5 W. Stewartville '18'5"; Dubuque Fm 32'3"

fm

(14)

Lea's quarry

Church Street, Leiana. $\times \frac{1}{2}$ mile N. of town on west side of road. Lea's X. NW $\frac{1}{4}$ SE $\frac{1}{4}$, sec. 5,

2 B&W photos

T 95 N, R 5 W. Stewartville

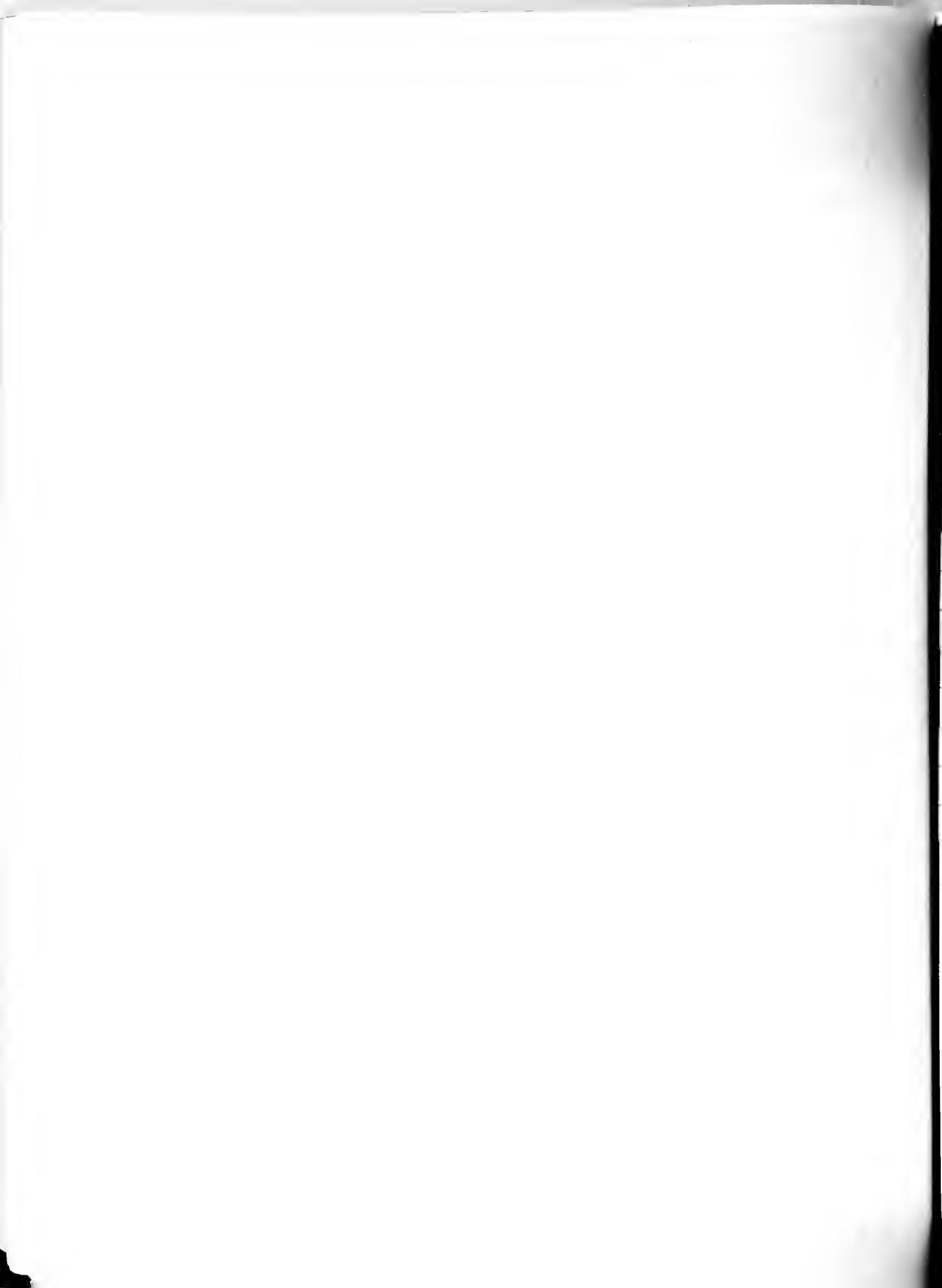
2? CS photos

Fm. 17'2"; Dubuque, 33'4"; Magnobeta $\frac{1}{2}$ '3"

A set of beds, identified by thin shaly bands at top and base (± 9 -10') is very burrowed, and the burrows filled with more silty carbonate. Swallows have been able to excavate these old burrows for their nests.

Levorsen, Gerb & Broadhead, no. 45.

Red gums in bloom. 1 tree opp. Motel 6 on side Devon (street, like acre opp hedge St (\approx 11.5'0")
Upper cliff. $\frac{1}{2}$ acre (10'0")
Upper cliff. Swallows in late joints



5/15/95. Dubuque, Iowa

left Motel 6 at 1:15am after reviewing field notes & locality data. Decided to stay another night (through Tuesday night) We'll take in Illinois locality by radiating from Dubuque. Took US 20 west to Dyersville, then Co. Rd 136 through New Vienna to Luxembourg; turned W on State Rd 34 headed toward Colesburg then on toward Folgerwood



5/15/95

⑭ Section just west of Twin Bridges Park -
Twin Bridges Park ^{top of exposure}
ca 6 miles ^{East West} $1\frac{1}{3}$ ' ledge
Colesburg, Iowa on
State Highway 3 (3-3 miles
E. of junction with St Hwy 38).
Tried to find this on L+G '72
and think it is their
Danforth, top of Sherwood double chert
Member. (Chert sequence 3)
Member

Almost 6 miles east of
Folgerwood, S.P.S. $\pm 20'$ Massive weathering
? Photo B+W ^{Rifle Hill Mbr} ^{base of} ^{20'} ^{base of} ^{25'}
of Stewartville Fm ^{crosswork pattern} ^{some CS and}
crosswork pattern ^{varve within}
& thalassinoides ^{3 1/2-2" laminae}
belemnites

⑮ Clayton ^{intersection of} ^{road cut & section}
County Rd X 2 1/2, Littleport Rd, starts at
bridge over river & extends 2 miles up
hill, Exposures on both sides of road;
loc. 57, Hevson, Gesh & Broadhead (1979)
Littleport Roadcut. SE 1/4, Sec. 25 & NE 1/4
Sec. 36, T 92 N, R 5 W. Dubuque Fm. 33' 7";
with Maquoketa Fm contact above & Stewartville



5/15/95

contact below. The lowest shale parting of Templeton & Wilmar (1963) is 7' 3" below the base of the marker bed (L, G & B. 1979, p. 64).

If photos B & W coming down hill starting in Maquoketa Fm.

(at Volga, the Elgin Mb. of Maquoketa Fm in creek bottom

Violets; mauve flowers

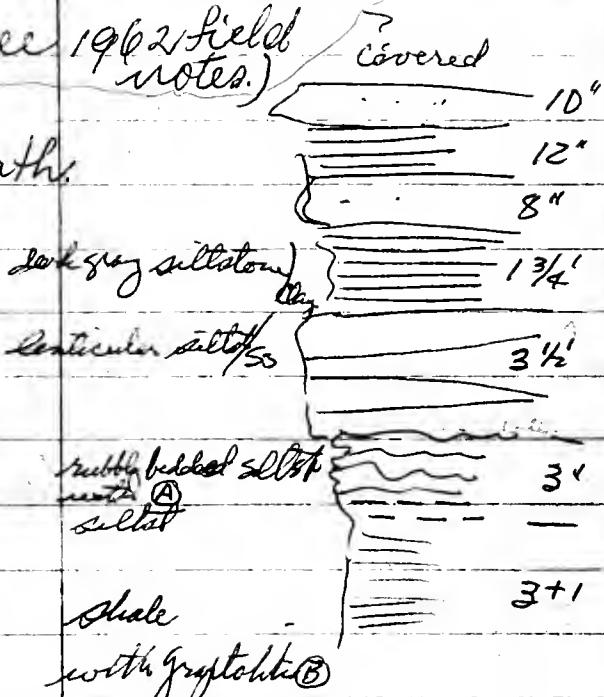


5/15/95.

$\frac{1}{4}$ mile

⑦ Section on road immediately ^{S of Grafton} to the ^W side of road. Alg railroad bed has been ^{been} Pleotax-2 B/W $\frac{1}{100}$ at f.4 Iowa,

Dubuque Co. (see 1962 field notes.) covered
converted to a
gravelled bike path.



Float,
Col. 5/15/95A

A. Orthocerids
solitary corals
encrusting bryozo.
brachiopods

✓ Dolorthoceras sociale ^{Cladopagites?}

From Graft to intersection ^{then east} of Dubuque. On the way to ^{about} Twin Springs Cr - road section on W side was noted.

GR thinks this is ~~ten~~ Mbs of Desmab Fm

1 See Lewison & Gerk (1972 p. 113? chart, Fig. 1)
2 but ???

3 This is lower part of Maquoketa Fm just above Repankete zone
4 R.S.



5/15/95 (18) Becker Quarry - Asbury, Iowa 5/15/95
 Maquoketa (poorly exposed)



a lower band "pock-marked" marker bed of L.G. 7 1/2"
 - v. distinctive interval (minicaves)
 & then a few inches up another one v. distinctive band of Stewartville
 (L.G. & B, 1979) p.62, 64 (loc. 58)

loc. 58, Levenson, Gehr & Broadhead (1979)
 (64) "Dubuque reference locality, north side of Kayfmann Avenue, just before intersection with N. Grandview
 We were not able to walk to face of quarry

hilac just beginning to bloom.

... more sand, & more quartz from south



5/6/95

(19)

Dubuque. Corners of Horas Blvd & Cox St.

loc. 51. Dubuque type locality - abandoned
x north side of Horas Blvd at Cox St.
intersection. SW $\frac{1}{4}$ sec 24, T89N, R3E.

Upper 21' of Dubuque Fm. with
Maquoketa contact x has been partly
filled for a parking lot acc. to
Henningsen, Gerke & Broadhead, 1979

loc. 51. 1 B&W photo.

We couldn't see Maquoketa Fm.
beds rippled above clay. Beds 8-10"
acc. to depth of burrowing

These are shales up to a couple inches

- the shales are thick & thin
Environment of deposition ??? -

a lot of silt in past due to extensive
burrowing "pockmarks" extensive in
lower half of bldg. Alumni Campus

Center is a new bldg so Maquoketa Fm
prob. removed in bldg this structure

Note MS20 (Dodge St. is being
widened & there is considerable construction)

(20) 1/2 mile W of Devon St & Dodge St (MS20)
intersection. Road cut N side of Dodge St
shows upper part of Dubuque Fm with a



(20) is across from Motel 6 at
Albuquerque



(20) contd (old road cut)
possible marker bed ~~close~~ to
5/16/95 base of section. (L, G & B, 1979, loc. 51)

21 X on east side of IL 52, ca 1 mile from
junction of IL 52 & Hwy U.S. 61. To the east
X. Dubuque Fm & underlying ^{top of} Stewartville
Fm. 1 B&W photo

100 yards south on IL 52 to Olde Massey
Road; turned into southern entrance
of X (v. gullied road in X) where we
were at top of Dubuque Fm & weathered
Maquoketa Fm slope. 1 B&W photo.

long grade of road IL 52 into St. Donatus
from north. Extensive weathered
road cut.

Various roadcuts on IL 52 into
Bellevue. Gas at Conoco, N end of Bellevue
hump at Wagner's End of Bellevue
Bellevue State Park at top of hill. High
massive bluff at top of hill of lln, dolomite.

22 Maquoketa Fm bottom is covered &
we could see v.v. little of it. Overlying
unit is lln Hopkington Fm
& lower part is a v. shaly, silty
dolomitic siltstone (see Coss 196?)



5/16/95.

Co. Rd 2134 to Preston, then Iowa Hwy 64 ^{west} to Maquoketa
Then ~~on Hwy~~ 61 north to Dubuque

← 5/16/95/ JSC B
Sparry calcite from Dubuque Fm

(23) (21) Opposite our motel, Dubuque, Iowa
Maquoketa Drive & U.S. 61. Bluff ^{overlook} construction
site (Called locally ~~Steel Post~~ ^{Key West})
Heavy equipment businesses
Extensive weathered shallow
slope with 1 float of iron-replaced fossils
Ironstone in upper/middle part
dark brownish grey at
bottom (6'-8' thick) overlain by
3-4 ft of lighter grey shale.
There was evidence of fossiliferous
material (not recognizable fossils)



5/16/95.

5 ca. 2 1/2" diameter

(20) cont'd. Large chunks of sparry
calcite from about 3 ft near
top; prob. below Magnobeta Fm
contact. Coll. 5/16/95/F.

US Hwy 61 east from Dubuque into
Wisconsin. Excellent roadcut
from Mississippi R up hill
to east.

Redwing blackbirds



5/17/95

~~railroad crossing~~

In railroad cut at Scales Mound, 1 mile E of
left Deerfield via US 20 to Galena
(coffee stop) then Stagecoach Trail to
Scales Mound. Photo 184W. (24A)

See Willman et al. 1973 p. 85-86.

and then into deeply weathered yellow brick stone
yellowish brown weathering yellow ^{silicate}
It greenish gray grades upwards into
limy, concretion bearing; 8"-12"
It yellow tan weathering - greenish gray fresh

Shells, darker gray fissile

Siltstone, lt yellow brown
11.25-3.15 1.1

Shale, lt. gray, fresh
25 ft. $\frac{1}{2}$ in.

Selkstone reddish
11.8 18.1 22

Shale, silty, fissile, bluish gray

seitstone, reddish

Shale, silty, friable, lt gray

siltstone, bed is irregular, red-brown $3\frac{1}{2}$ "

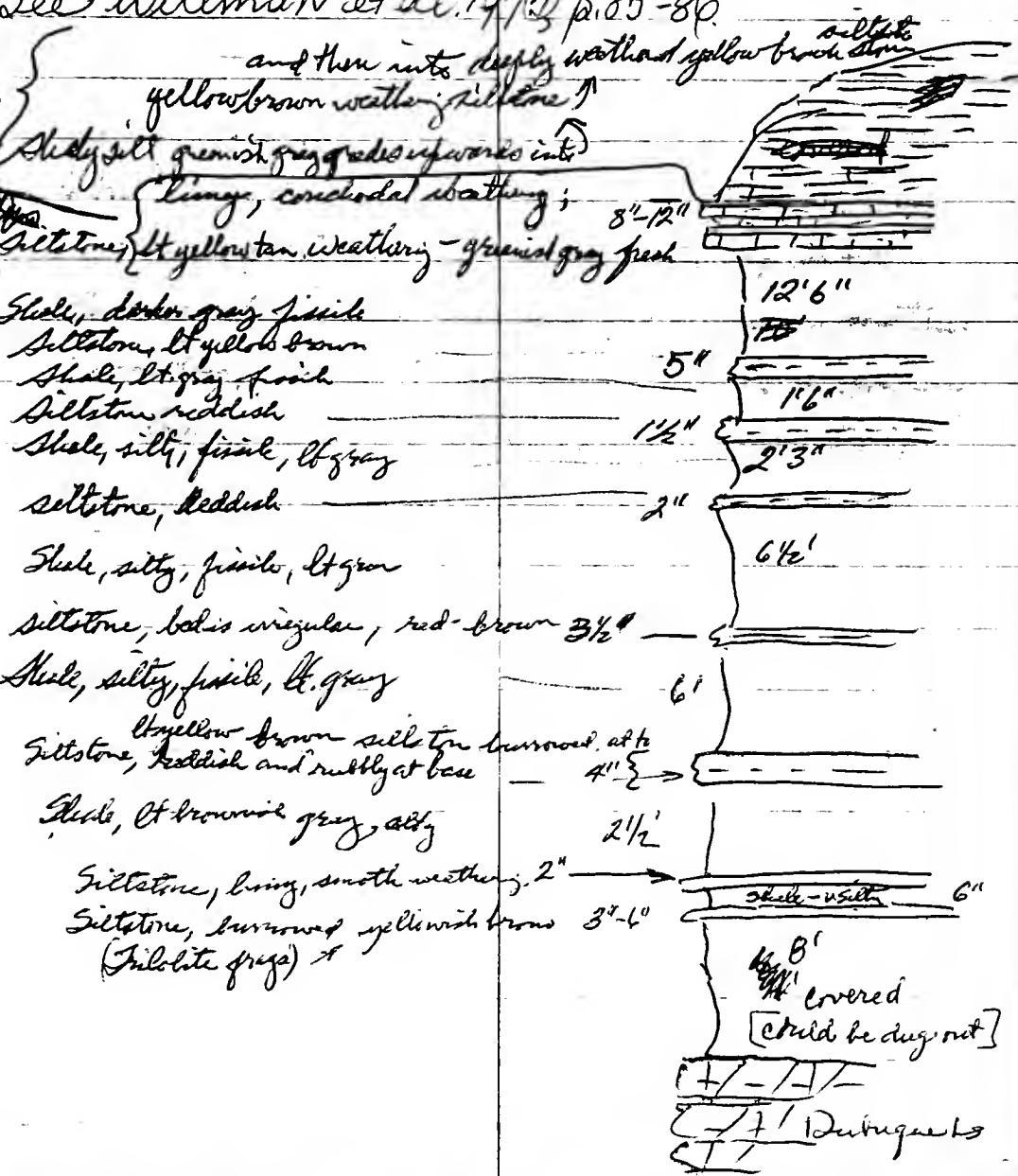
Shall, silty, friable, bl. gray

Yellow-brown silt to boulders, at top
Siltstone, reddish and rubbly at base 4"

Stale, Et brownie gray, also

Siltstone, lenticular, smooth weathered. 2" →

Siltstone, burrowed yellowish brown 3"-6"
(Tribolite frags) ✓





24.B

5/17/95 Upper part of Scales Formation about 5 miles
Scales Mound on railroad cut. photo 1-3/W

on RR tracks & 184 W photo from top (edge of road) looking
downs on 2 cut

Silty shale, lt grayish gray in 2 to 3" beds and
regularly interbedded with

Siltstone, very shaly in 2 to 4" beds. - There are
at least 2² cycles of these two lithologies regularly
repeated. Through about 14" of exposure above
debris that covers base of cut, ^{ie} about 829'
not seen at base of cut above railway level

Some surfaces have fragments ($\frac{1}{4}$ ") of organic material
(something like a ^{flattened} "grass"). Worse保存 in
siltstone facies. Fibrous frags. (? Dissolites?)

limy Slightly limy (limy) bed about 4" down from
top of exposure with gray appearance on one
surface (? top surface) $\frac{1}{2}$ " ripple crests about 2" wide
nodules in some pieces. Bands of pyrite (nodules) in
some beds -

Question (?) could the upper part of this railroad cut
be as high as NW Illinois facies of H. Atchison 7.3
Facies Atchison

Could the 2² cycles (or these about 5)
correlate with the cyclicity in the
Cincinnati area



5/17/95. Dubuque US20 to Galena
to Scales Mound on Stage ~~Chariot~~ Coach
Trail. Then after looking at Scales
Mound area, we took road to
Apple R. Canyon St. Park - road closed
to Apple R. Canyon. Went south to
Mt. Carroll, Brookville, Polo, Dixon
to Mendota

US 51 to Bloomington & I 74 to
Mendota. Arrived in rain



5/18/95.

Urbana Illinois - visited university
Took Interstate 74 to ^{then I-70} Indianapolis /
Dayton, Ohio. The Motel 6 is ca 9 miles
N of Dayton. It rained heavily from
just east of Urbana.

Stopped at next area tourist
information centers at W. entrance
to Indiana & also Ohio.



5/19/95 West of Camden, Ohio

Dayton, Ohio. Visited Wright State Univ. library & xeroxed 4 articles on U. Ord. stratigraphy.

25 West of Camden on Route 725 on old abandoned Rte 725, 1/4 mile W. of bridge on West side of creek. Excellent exposures in east bank of creek. Pebble Co, Ohio. shale w/ some ls.

Nodular shaly ls. with thin siltstone interbeds



Spiriferida, bivalves, other bivalve fragments, corals, stony, sandy ls.

Abandoned

Road cut is now overgrown. Upper part of shale w/ some late ledges is a nice cut for a house on N side of road.

* 5/19/95 A through G.

Creek name of creek river

See 1963 field notes for location of 1995 box collections (6-11-63 AATAB etc.) purple marks on late ledges throughout

Side creek comes in on N side of old road - main river thin bedded late ledges

3 B&W photos at upper 1/3 of cut

4 B&W photos at bottom of creek where extensive river bank section



5/19/95

CR saw 2½ foot diameters colony of
ramose hep; branch diam ca 1½ cm;
no monticules. This was a huge
float block in river bed at
bottom of creek, just upstream from
bridge ("new" bridge). Old bridge
has been removed

We took some float samples
to see if they approximated to
collection sites in 1963 so we
would have an orientation
on where we were in old road
cut section. Coll. 5/19/95A-F. Coll. 5/19/95G
was float in roadway gravel.

late is a bluish-green-grey;
v. nodular bedding; v. diverse
fauna & extensive biofouling
At bottom of creek, late more
thickly bedded incl. calcarenite
bed of at least 1½ feet

Interstate 70 - 14 miles E. of Ohio line - massive
late - good road section

5/20/95

Left Englewood/Rayton & headed west on Interstate 70. Took US 27 south through Richmond, Indiana, on 227 because of fire on US 27. Good road cut w. good ~~late~~ exposure - several sections along this road

Rejoined US 27 before 227 splits off to east. Good exposure of shale & thin ~~late~~ beds just S of Richmond on US 27. Consider Liberty Rd cut on Indiana 44 W. of town is grass covered; no exposures.

Gasoline at Liberty

This day we tried to trace Fox's (1962) sections & locations.



Union Co. Fox (1962)

5/20/95 2 miles E west of Liberty Ind. on north side

(26) of Indiana 44, west of creek just west of turn off to "Treaty limestone". Very poorly exposed road cut.

~~5/20/95~~ float from near arrow.
small brach. float) 5/20/95/D → Shale + siltstone with beds of fossiliferous dolomite

float (5/20/95 C
coral bed.

5/20/95/B ?"Tetradium"

with *Leiocerasma* + *Systoles tridentis*

"stick" tropostomus float)

5/20/95/A

ledge of 2" to 15
calcareous
(undescribed)
2-4" interbeds of
green ~~green~~ calcisilicate
± 12' soon

ledges of 2"
fossil dolomites
with greenish gray
calcareous (algal?)
interbeds
15 to 18 feet soon

Site is also:

1 mile E of Ind. 44 to River ^{Brookville}
& Deakertown State Park
upper part of Brookville ^{Fm} & lower part of Liberty ^{Fm}



5/20/95 Ate lunch at stream edge.

We continued on Indiana 44 to Connersville, then took (121) to meet US 52 crossed US 52 to take a small unnumbered road to Beech Vista. "Rolling" roads but no exposures in covered road sections; contd to Hamburg & then east on gravel road for ± 2 miles to "bluff" along N. side of valley.

Road cut on N. side of road w. ledges of coarse fossil hash (mainly brachs) - calcarenite (6"-8" ledges); sparsely calcite silty calcisiltite makes up some ledges. Road cut is too weathered to put a section together.

(27) Collection 5/20/95 F - float; middle part of Hickory Fm. Hamburg



5/20/95 Locality of Hay, Pope & Frey (1981)
(28) Bonwell Hill, Indiana

1st road stop 1 mile NE Brookville & 1/4 mile east of road into dam spillway, 1 photo B+W liberty of top of limestone cut on west side of road at top of exposure. Indiana 101 road cut.

large bivalve ca. 3" across, along radial siphons

~~Periplusphaea~~

Strange "cylindrical algal outlines" = hash of ~~beads~~ - forms distinctive layer perpendicular to bedding plane (up on end) & weathering pattern

2 photos B+W $\frac{2}{3}$ of the way down cut

Hay, Pope & Frey unit 3A is ~~grey~~ beds with iron oxide stains, phosphorite (?) and now brown yellow weathering top ~~grey~~ spongic ~~calcareous~~ concretions.

5/20/95 G. From "Excello" of Brookville Fm. - from bottom, float
5/20/95 H. Float from prob. 3a of Hay Pope & Frey.

5/20/95 J. Float; Bed by weathering

5/20/95 K. Float from lower part ~~of~~ ^{of} limestone shale of Unit 3a or top of 1a



5/20/95.

K. flower part Bonwell Hill contd
base of liberty at top of
Waynesville

T. most likely came from top of
Waynesville

edge of hill



5/20/95.

turnoff

29 Gass Hill. 1/2 mile N of road to Gass Hill
Material. On next hill N across shallow
valley from Gass Hill (Note N side of Gass
Hill exposes similar.

3 B&W photos. 1st one lower part
2nd one middle part & 3rd one upper
part of east side of road cut

Indiana 101 road cut

loose bry. Coll 5/20/95/L. Slab had
free bry. weathering out from upper
beds of Brookville Fm. (Hay, Pope & Frey
1981, p. 84, Fig. 9)

5 B&W photos B&W

5/20/95/h. Bry. bed ^{15ft} 12 ft above
base of Whiteewater Fm

5/20/95/M - some trps (large stems)

5/20/95/N - "Homotypha" bed
2 collections

going
uphill 5/20/95/O - free specimens

top of section? am not certain of
collection level.



5/20/95.

Note: Road section on US 27, about
1 mile S. of city of Richmond city limits
[thick ~~one~~ of thin ~~lates~~ + liny shales
20 ft.



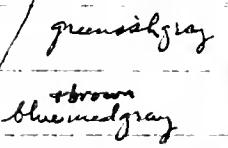
5/21/95

Stop 1 (2:30pm) RR cut at north edge of

30 Wright Bros. Memorial Hill, Fairborn, Ohio.

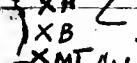
2 B/W photos to S; 1 B/W photo of N. side. Trees ~~thick~~ 5

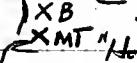
Ledges of lt brown weathering limy dolomite/sandstone 2-2½" 

Shale, med. to light gray, v. silty. ± 25' 

55. ferruginous, v. gray w/ orange cal., molds filled with siltst. (1½' - 2' lt. greenish gray)

ledge at top is nearly planar. 4-5' 

hs. ledges below are v. shaly & silty and poorly exposed. In fact this could be a  3" to 4" ledge of

covered predominantly shaly interval →   

with thin shaly ls. interbeds ± 22' 

Some ledges are full of bryoz.

5/21/95-A = Homotyga band at top = XH (about 6"-8" thick Homotyga?)

5/21/95-B = XB (Bythopora?) 2 collections

5/21/95-C = XMT (Mixed Leptostomes) 2 collections



5/21/95. General area of Fairborn, Ohio
of Ohio 235

(31) X N side of road $\frac{1}{4}$ mile from
intersection of Interstate 675 & Ohio 235
Broad quarry shows:

Dolostone, uneven bedding, massive to
thin bedded, bioclastic in places,
light gray - yellowish, whitish, color varies
on weathering.

Shale, dark gray top; some 2' relief
reddish weathering; grainish dolostone
from this interval.

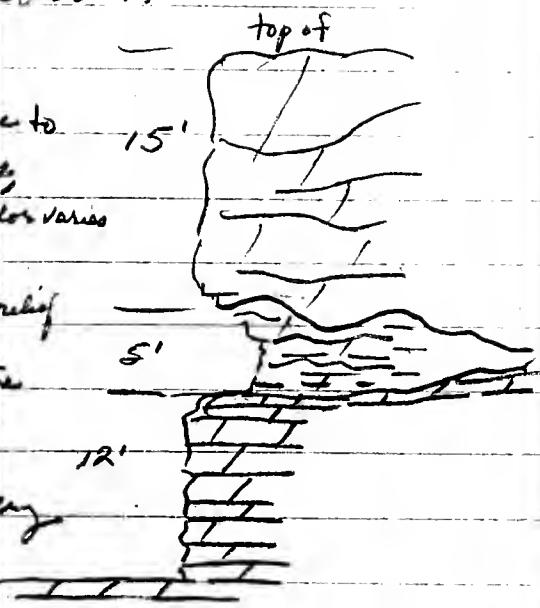
Dolostone, lt. reddish brown weathering
4 to 6" beds.

Quarry floor is on a ^{mottled} green dolostone
12 ft unit & 15 ft unit.

{ 1 photo N side X showing no shale/silty shale
{ 1 photo B & W of pock-marked surface of X floor
Bisher for is pock-marked & burrowed.

2 photo, B & W east side of X showing
5 ft shale "lens"

Am. Aggregates Inc. Fairborn lime Plant





5/22/95

Finished packing samples.
About 11:30 am took samples to CCPSat
1308 Brandt Pike, E. Area of Dayton.
Went P.O. about 1 1/2 miles further ~~on~~ along
of Ohio 201. Sent postcard to Rick & Barb Cen

Hamburgers at Riverside near Interstate
675. Then took I 675 to meet US ~~35~~ 35
US 35 to Xenia then back through
Xenia & picked up Ohio 380 south &
after several attempts stopped at
Caesar Creek State Park information
centre. Here we obtained maps

3 B&W photos at Spillway



5/22/95 (32) Holland (1993) locality
Caesar Lake Spillway (4' fall)

Spillway section of Holland 1993; saw about 27' of limestone and siltstone with numerous bryozoans, brachiopods and burrows. Some ls. beds have wavy bedded lower surfaces, some ls. have wavy bedded upper surfaces, some have both ls. = limestone as base conchoidal fracture truncated by ls. can only be traced for ab. Herpetella sp. ls. are truncated by ripples solitary corals ls. of bryozoans in general, smaller ones near base of section, of several species; larger "Homotrypa" are extensive mud top. "Rickets", Herpetella sp., large solitary corals common. Those have a cyclicity of 3' to 5' of ls. and ls. + thinner siltstones.

"Several" collections. There are 6 or 7 (check photos) of these cycles which are more silty in the lower 1 or 2 and then become less silty upwards.

3 collections

5/22/95/A - float from wall of spillway (walked across flat)

5/22/95/B - N side of roadway float

5/22/95/C - on top of road in place.

Same units as at Slight Bros. Mem. Hill RR - no real weathered zone. Rickets is below this cut



5/22/95 (32) Holland (1993) locality
Caesar Lake Spillway (4' fall)

Spillway section of Holland 1993; saw about 27' + of limestone and siltstone with numerous bryozo, brachs. and burrows.

Some ^{ls} beds have wavy bedded lower

surfaces, some ^{ls} have wavy bedded upper surfaces,

some have both. One or two beds have

conchoidal fracture, 2" to 5" + thick, these can only be traced for about 30 to 40 yards before they are

truncated by ripplesurfaces. Two kinds of bryozoans

in general, smaller ones near base of section, of

several species; larger "Homotrypa" are extensive

near top. "Rectans", Hebertella sp., large solitary circles

common. Those have a cyclicity of 3' to 5' of

1. ^{and alluvium} silty ls and ls. + thinner siltstones.

"Several" collections There are 6 or 7 (check photos) of these cycles which are more silty in the lower 1 or 2 and then become less silty upwards.

3 collections

5/22/95/A - float from ^E wall of
spillway (walked across flat)

5/22/95/B - N side of roadway
float

5/22/95/C - on top of road in
place.

Same units as at Ilight Bros. Mem. Hill RR
no red-weathered zone. Octm is below this cut



5/22/95. (33) Caesar Lake Dam at Spillway
Lower section at Dam outlet. (A. Gold)

Calcareous shell frags about $\frac{1}{4}$ in. dimension. Sparsely cemented with some reddish weathering.

Cycles of nodular ls. 2"-3" thick and finely shale (dark gray) and very thin ls. Cycles about 3 to 5' thick.

Brachiopods present, but are small and fragmentary in these thin limestones.

2 B&W photos.

3 collections

5/22/95 A float
CP visited this - "wet shoes"



5/22/95

Left Caesar's (in State Park) at/near
Harrobyburg ~~avenue~~ to Cowan then west to
Waynesville (very much ~~titivated~~ tourist
town); cone & hamburger here. Then took
In exiting at Waynesville, we saw out
1963 road section, which for the most
part is overgrown, then to "coffee" break
stop above.

Drove to Lebanon & then Clarksville
explored several roads & did not find
suitable sections

Took Hwy 350 east to Hwy 730 &
then turned north on Hwy 730 about
1 mile to Cowan Lake Spillway & Dam
1 B&W photo at Spillway

Can't read
titivated



5/22/95

34) Cowan Lake Quarry

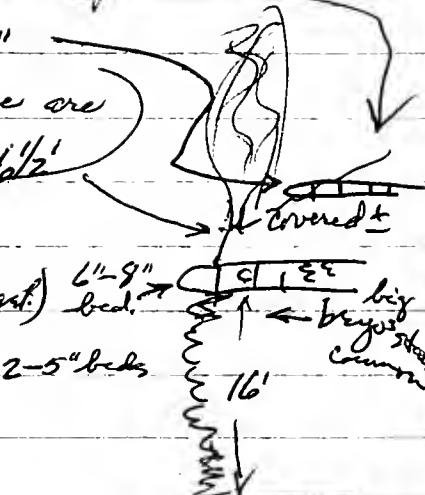
Glacial hills above

Coarse calcarenous granitite - 10' to 12"

Brownish yellowish tan silts above are
weathered and not exposed as beds. 11/2'

Calcareous, gray calc. cement

Orange red upper surface is sandy (aren.) 6"-9" bed. 1 1/2" big
flat trickles down into bunnos 2-5" beds 16' common



Calcareous packstone, fossil 3" to 5" beds
with thin interbeds of siltstone.
Bryozoans + brachiopods.

Relayed (Pecten) brachiopods (Ref)
only rare bryozoans

4' dolomite

(fishermen state maintenance personnel
picked up road signs)



5/22/95

From Cowan Lake Spillway we took Hwy 730 to Blanchester, then Ohio 28 to Mulberry (driving through town) then I-275 to exit for Ohio 125 where motel is located

All the mowed "lawns" & street right-of-ways.



5/23/95

Motel reservation Cincinnati East

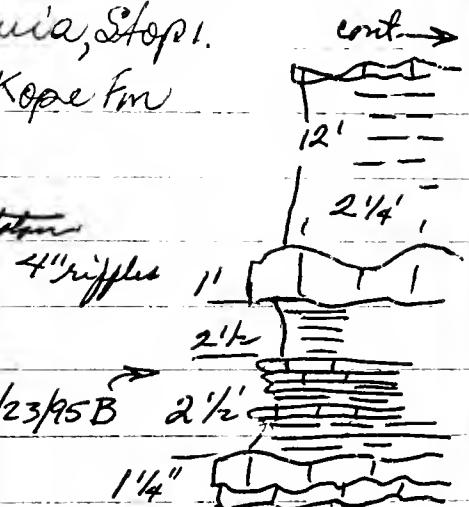
3960 Nine Mile Road. \$33.34. Motel S.E. ext. 1075
Travelled on I-275 to Ohio 32 and stopped
at 2nd Batavia exit at Bane's Road.

(Hoy, Pope & Frey, 1981 - Batavia, Stop 1.

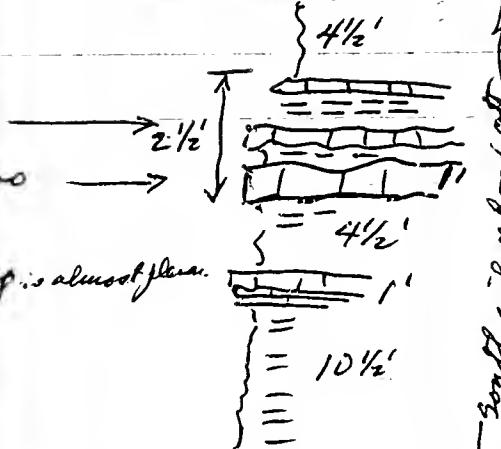
Lower stop (Stop 1 of H, P, + F) Kope Fm

(in road to highway)

Siltstone w/ a few thin calcarenous siltstone



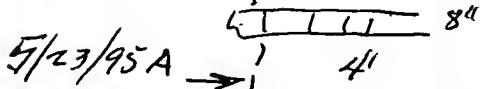
{ calcarenous,
calcareous siltstone, burrowed
Calcareous, grainstone/packstone massive



Calcareous, ferruginous weathering - top is almost flat.
Base is silty & gradational

Siltstone, very shaly sandy

Packstone, bryozoans + brachiopods

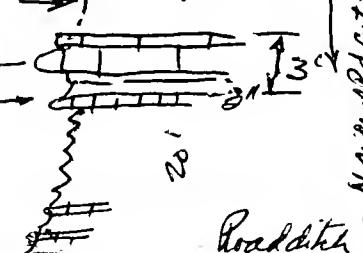


Brachiopod, grainstone/packstone, brown stained ^{FeO3} greenish slate

Crinoid bed - surface is columnar jointed

some fine wavy bedded calcarenous

Siltstone, gray tan weathering, very burrowed



Roadcut

South side of road cut

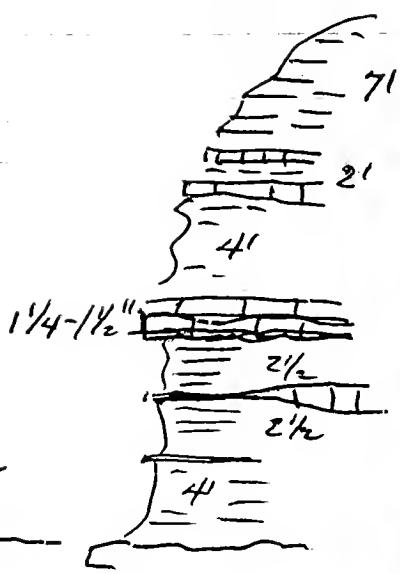


5/23/95. Hay, Pope & Frey (1981)

More brachiopods

Continued from
previous page.

Covered



Calcareous

Siltstone w/ a few thin calcareous - these
thicker & thin on outcrop

Calcareous ferruginous ls

Continued





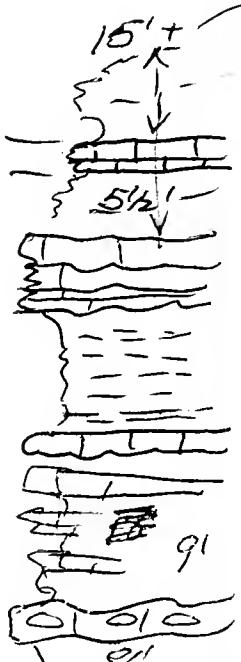
5/23/95 "Excell" Mbr. of "Brookville" Fm. on Ohio 132 at
 ① Tilager Rd about 3/4 mile NE of 132 junction w/ 122.
 (Hays, Pope & Frey, 1981. Step 2B
 NW of east side of road cut.

Some beds with brachiopods & few bryozoans
 in calcarenous
 the rocks are too silty for brachiopods & bryozoans.
 "Excell" mbr of "Brookville" Fm.

Poorly exposed ledges of ls + siltstone

1 1/2'

Lst. zone, green, calc., burrowed, shells on
 some surfaces as "dig" surfaces or as
 "colonization" surfaces; some well laminated,



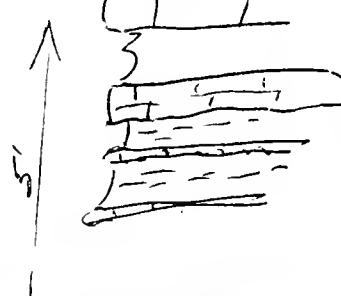
Calc. with 2"-3" siltstone pebbles (picture B/W)

2'

12'

opposite 5/23/95 D
 Tilager Rd. (flat)

Calc. siltstone, grayish gray, burrowed
 and 2"-3" irregular ledges to
 calcs. fossils. grainstone/pack
 brachi + trilob., + some bryozo.





5/24/95 Took Ohio state 125 from ~~Williamsdale~~ Williamsburg

Ohio 125 road N+S of White Oak Creek; excellent long road cut sections. Holland (1993) lists this section 8 miles west of intersection US 68 + Ohio state 125 (12:15pm lunch \$1.47 at Georgetown)

(Posted 4 airmessages at Amelia P.O. to Herbert Holdsworth, Rev. Holdsworth, Joan Bushworth & Rev. C. Tyndall re Mary's death) (See 1963 field notes 5/29/95, Ch. now opp SW

(38) Took US 68 N from Georgetown; ended up on Hamner Rd wh. intersected ~~Dear Delhi~~ Delhi-Anheim Road which we took to Anheim. Mailman to Edwards Rd SW of Anheim about 3 miles SW of Anheim weathered late on N side - several discontinuous exposures; also lower part of section in small ch on E. side of ch (photo B+W of late ledges in creek) " large "strophomenids" almost 2"-2" across, burrowed late siltstone; some thin late ledges (2'-3" thick) On crevices around hill after crossing

• 4 miles of section
small cb & sp chs on east side
we have lowered "sparry calcite"
(red weathering soil) up at next
cycle w. silty lime mudstone
w. many brachs & few bryoz
[2.5 miles S of bridge at Anheim
on Brownstown - Anheim Rd.)
Hammes Rd then Tricity Rd into Sardinia

Brownstown



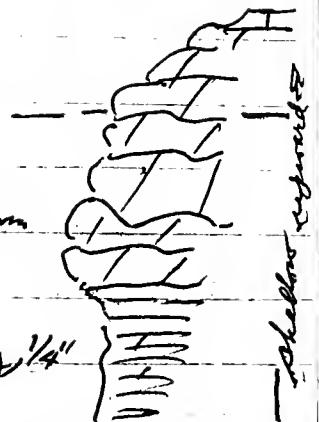
5 Stop 53, ~~Highway 32~~, 1984. ~~Rexroad &~~
 8/24/95. ~~about 1 mile west of junction of 41 and 32 on~~ Kleefeld 1984
 39 highway 32, near Peebles, Ohio

2 B/W photos

Pebbles dol. - light + w. light gray, some bands

"Transition" - burrowed, silt filled burrows

in a dolo-x-bedded, gray dolomite "crown"

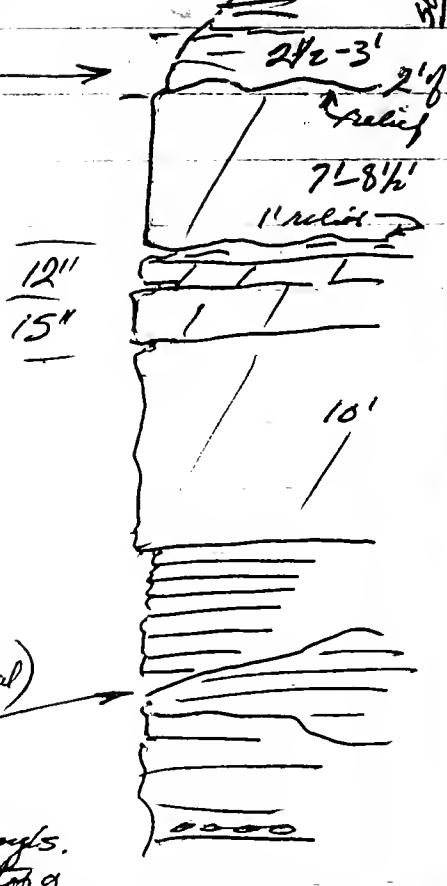


Lilley - upper part very shaly + silty, dark gray, $\frac{1}{4}$ " bedding, laminated appearance

Muddy, ledge forming dolostone near middle of shaly interval

dolomitic trans.

Dolostone, x-bedded, massive,



silty partings

Dolost, x-bedded, massive (beach?)

Dolost. sandy, + sandy silty dol.
 2-4" beds (barn or ^{mixed} glacial)

2 1/2 - 3" cut + fill surfaces

(several)

all pebble cgrs.
 20' below top of
 this unit

Bisher



5/24/95

Dolost., veryuggy, salty, brown
burred, some fossil frags. 15'
silt & pebbles common

— Gray shaled siltstone, poorly
exposed erosional sharp contact

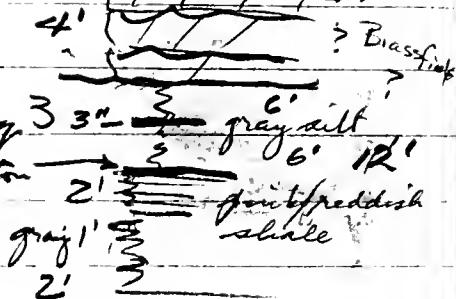
Check this!

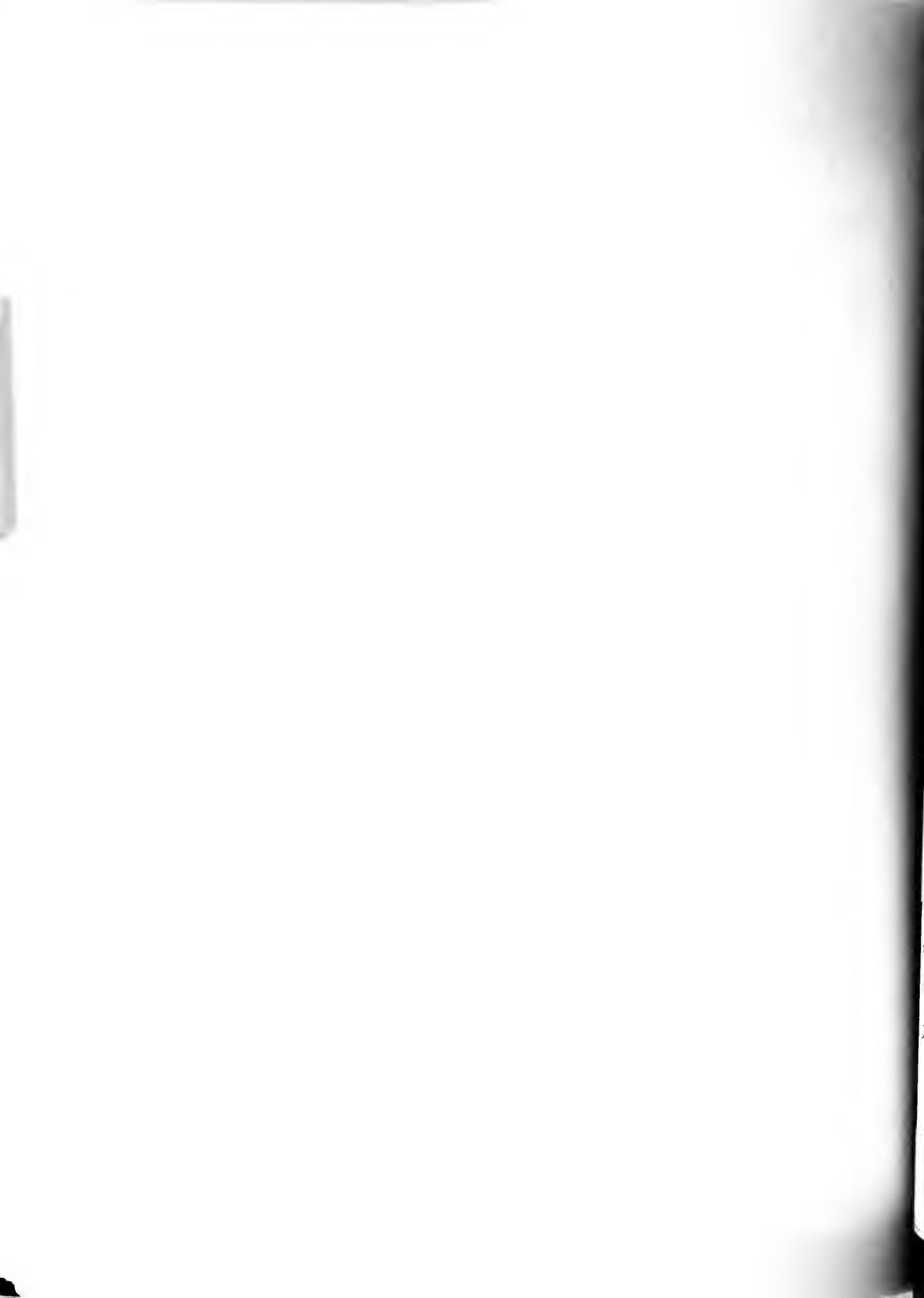
(Cont.) from previous
page

med. Gray shale with a few

1" Limestone bands exposed in

gully on S. side of highway 3 3" 3" gray silt
pencil 1993 6/16/93 2" siltstone 3" 6" 12" ?
gray 1" 3" 3" ?





5/24/95 ⁴⁰ Ohio St. at 41 immediately
S. of crossing of Ohio Brush
C.R. 1.4 miles S. of Waukonville, Iowa
slabby weathering Braufeld

irregular weathering with
shaly interbeds

50'

Massive bed of Lower Braufeld
with clear and molds
light colored shale

sharp contact

10-12'

Belfast Bed - sandy siltstone, olive gray,
burrowed (like Tabebesss).

9 1/2'

Red siltstones
Calcareous with

road

covered

1 1/2'

1 1/2'

1 1/2'

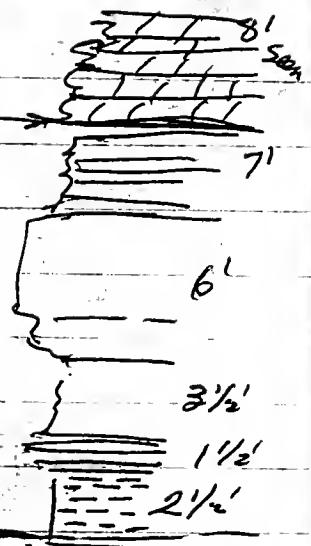
1 1/2'

Photo B&W. West face of road cut
Coll. 5/24/95/A. float a "base" of Belfast
on ledge above road. 20-3" thick
at Ohio Brush Creek, Stop 5A
Bexroad & Keffner, 1984, Field
Guide GSA Ann. Mtg.



5/24/95

(141) $\frac{1}{4}$ mile farther south on Highway 41
sharp contact with lower Brantfield
Slebby siltstone



Massive siltstone

Bands of clay-rich and silt-rich clastics

Laminated siltstone

Massive, unbedded siltstone sharp contact

Red beds shale with limonitic

Bands of calc. siltstone

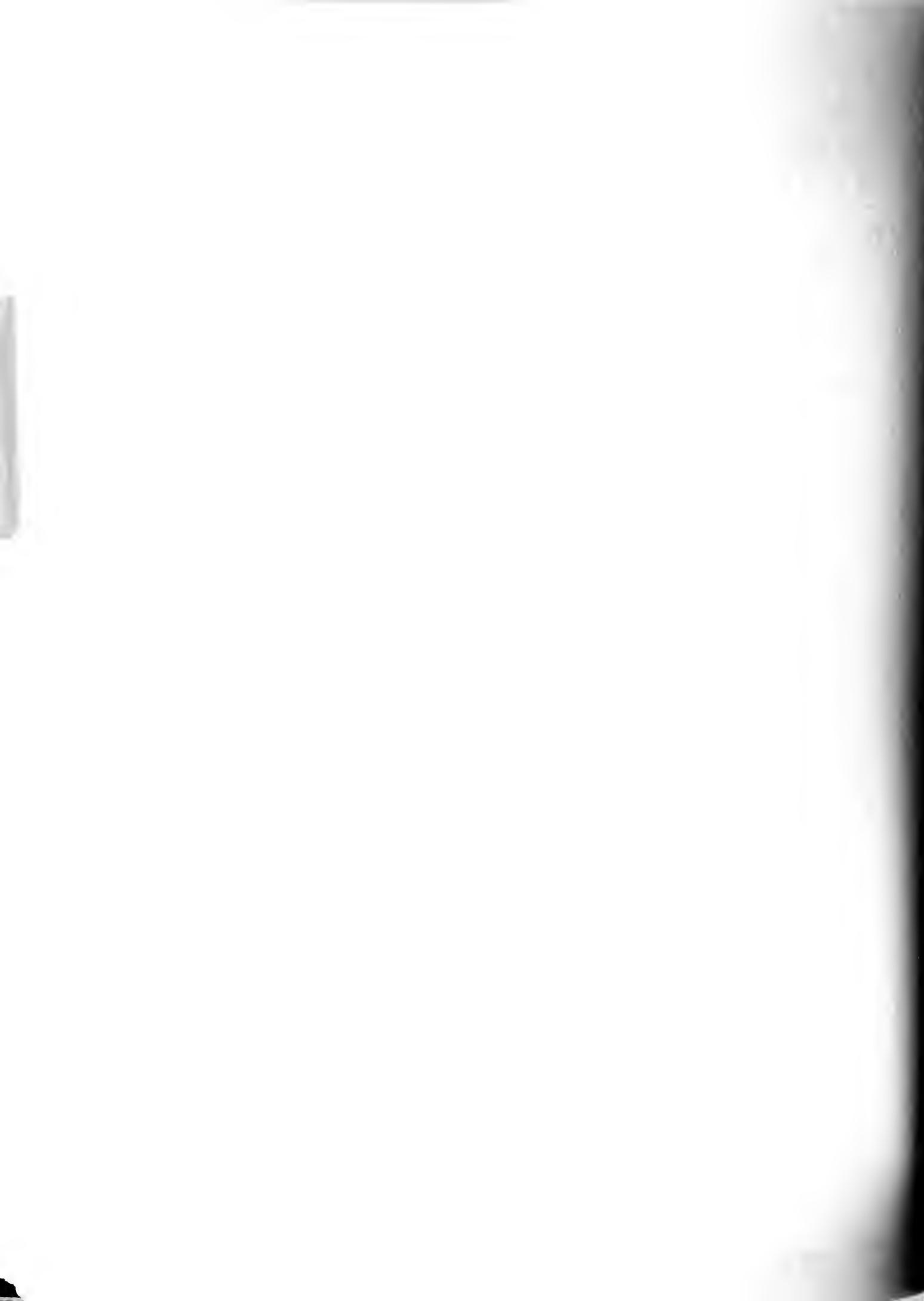


2 B/W & 1 color photo of W. side of road

road cut is

Immediately N of Murphy's Ridge Rd
which enters from W side of Hwy 41

Took Ohio St Road 41 south to
West Union. Road cut exposures on
West side of road



5/24/95 (H2) Holland undated
 (Holland loc.) 3 1/2 miles & we think his
 highway farther N toward corner
 3 1/2 miles N of intersection of
 Ohio St. and 240 & 41. N of West Union
 Brookfield stage contact on Ohio St. 41.

burrowed calc. siltstone,
 dolomitic

small solitary corals
 crinoids, bryozo.

5/24/95 B Et gray slate
 Calcareous/granstone
 sandy

cross-bedded in
 some beds.

calcareous granstone
 burrowed.

small crinoid bed

2'
 1 1/2'
 2 1/2'

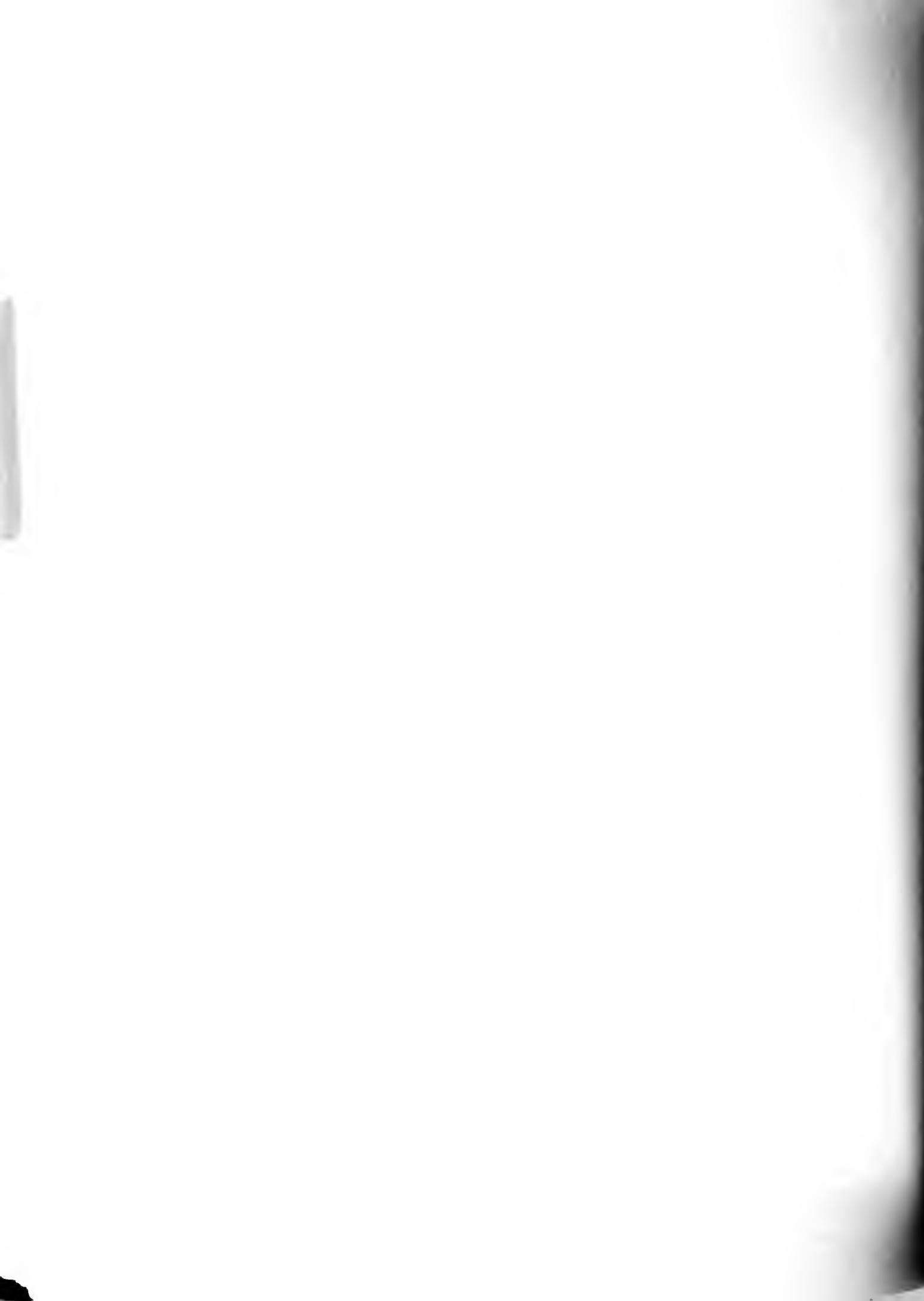
1 1/4'
 22'

road
 level

9 1/2'

Need to work out Holland's street sect graphs.

A very hot day - 85°F - w. sun!!



5/25/95. Thursday.

V. heavy rain on Wed., night & Thursday morning. Car truck leaked & part was wet. Needol sponge.

Afternoon - took Ohio Standard 125 to Georgetown. See following (1993 -

Approach to Georgetown from west
W. side White Oak Cr. 43

Ls. 8" ledge at top of exposure

Ledges of Ls. and siltstone ^{floats} ~~calcareous~~ beds

Coll. 5/25/95 A ^{float} ~~(see 5/23/95)~~
spherical sand. bread & "potatochip"

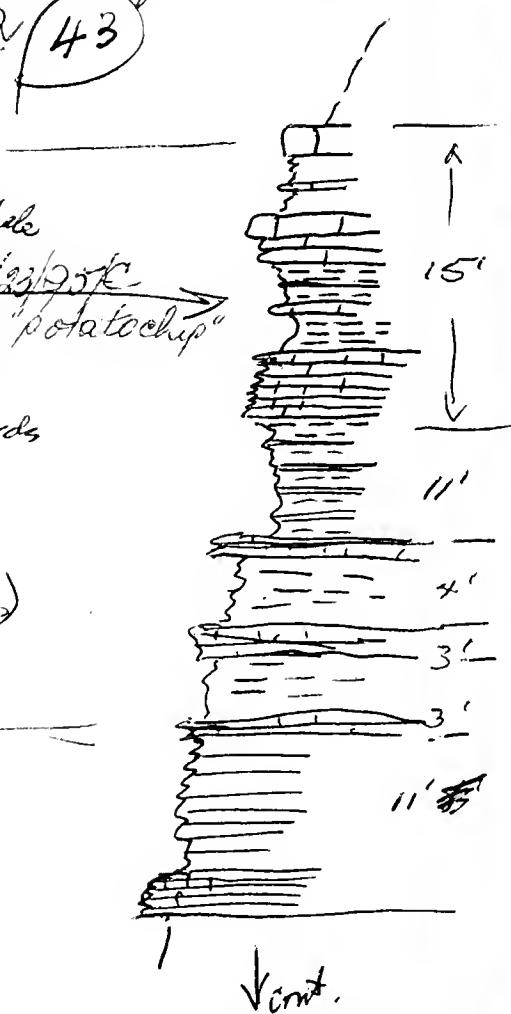
Shale/silt with a few thin ls. beds

Photo B + W

(float has "bivalves" & "Rhiphegymnia"
"pebbled" bivalve.

v. Thin bedded shale & limestone

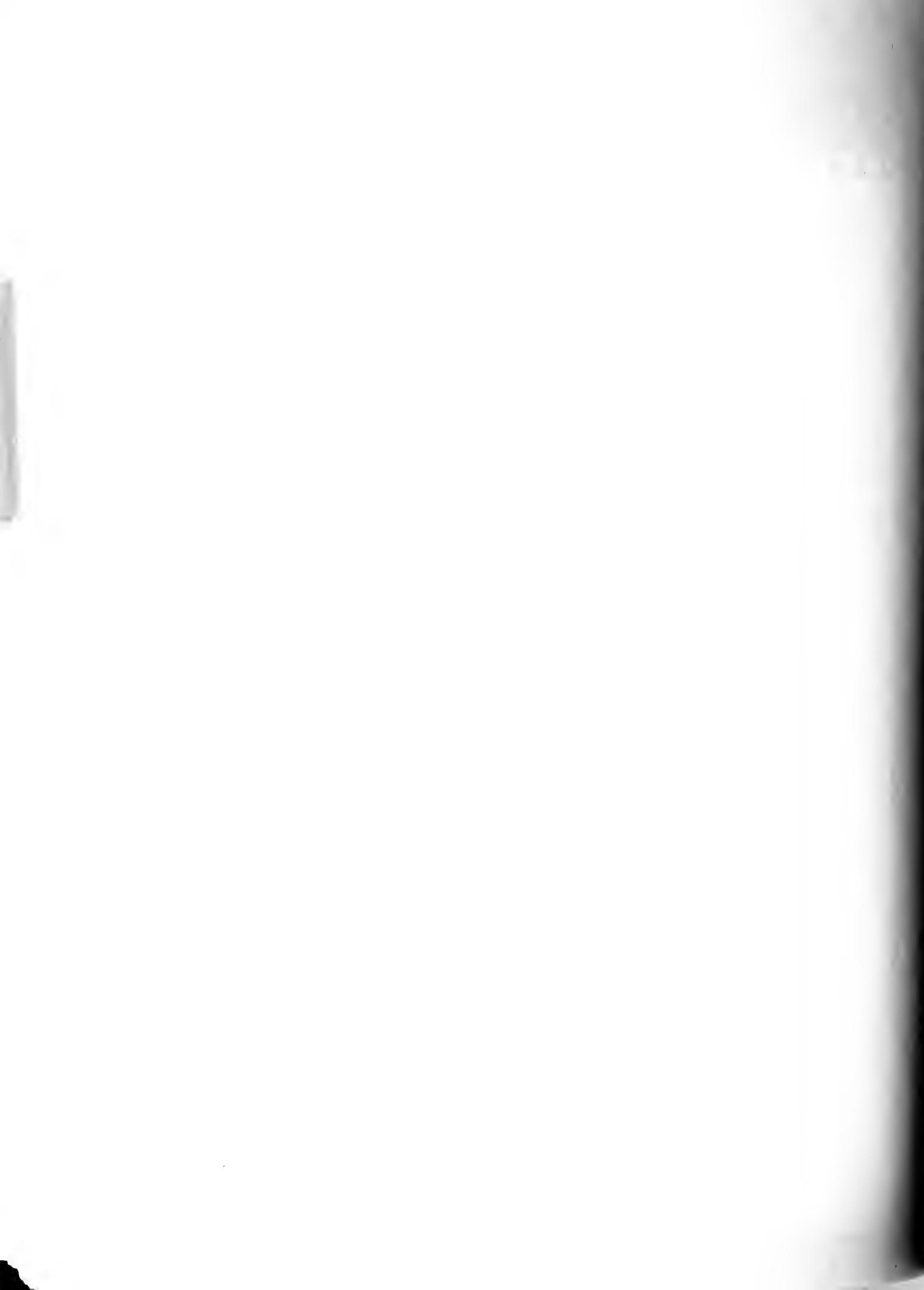
Total 4 B + W photos to cover
whole of c.





5/25/95

East side of Whiteoak Creek valley
on Ohio St. Rd. 125. - in road cut, the
6 or 7 ~~late~~ shale couplets below
the rock section exposed on west side of
Whiteoak Creek - see bottom of
this western exposure on the next
page



5/25/95. West side of Whiteoak Cr.

Shale/siltstone with almost no thin ls. ? Miami Sh. ? or

another shale? some "nodular" ls but very thin

Ls. calcareous + silty.

Ls. thin bedded 1" to 2" beds, with

shaly/silty interbeds separated by 2' + more silty interval
a vague cyclicity

Ls. as above

about
12' to 15'

base of West road cut

base of East road cut

Total of 6 or 7 cycles below lower ls. shale.
(see previous page)

cont. ↓

13'

1"

3 1/2'

3 1/2' 1 1/2'

1 1/2'

2 1/2' 1 1/2'

1 1/2'

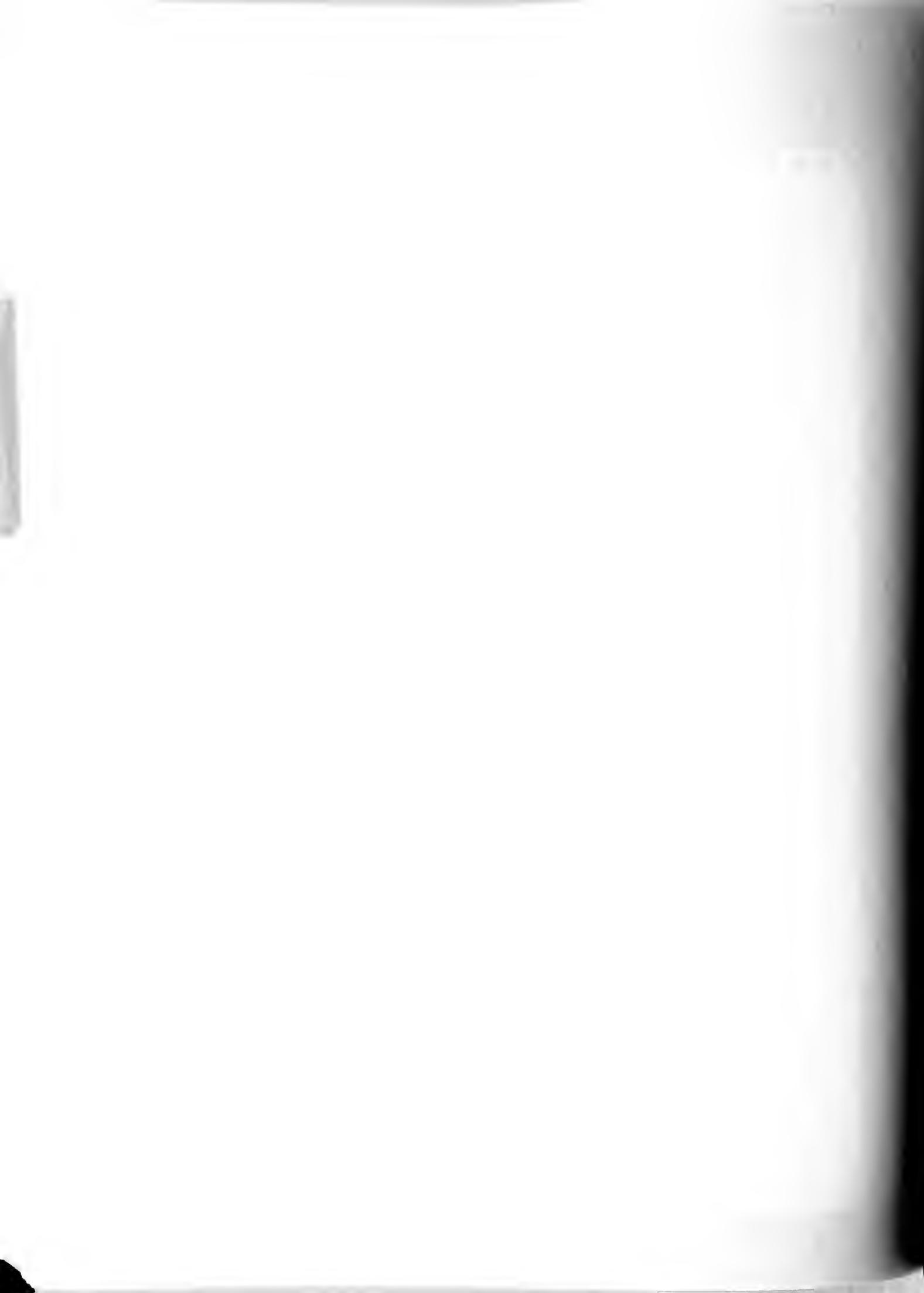
4'

2 1/2'

3 1/2'

2'

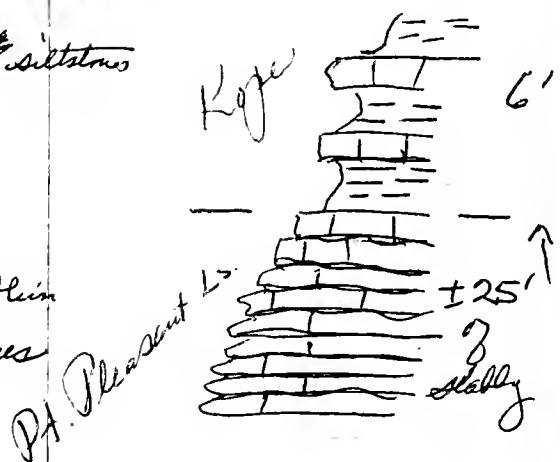
3' seen



44

5/25/95. Point Pleasant. Holland's loc.
Turn off R.R. 503; stream exposure on N side
Stop at about .6 mile west of Pt. Pleasant city
limits. Creek exposure -

Ls. ledges ^(8") with 1' to 1 1/2' siltstones

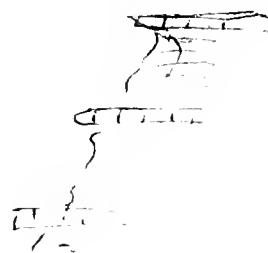


Limestone - slabby -

8" to 18" beds with thin
siltstones - forms ledges
in stream

Up private road to Quarry Creek lane
exposed ^{exposed} of ~~late~~ siltstone in NW side
of access road about 20' above outcrop above;
two-thirds of the way up the hill

Ls in 2"-3" ledges in
deeply weathered shale + brown
siltstones



Coll. 5/25/95/B - float but prob from a
ledge right there.

